

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

ENDOH et al.

Atty. Ref.: 900-397

Serial No. Unknown

Group:

Filed: August 10, 2001

Examiner:

For: A SEMICONDUCTOR MEMORY AND ITS PRODUCTION PROCESS

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August 10, 2001

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

In order to place the above-identified application in better condition for examination, please amend the application as follows:

IN THE CLAIMS

Please substitute the following amended claims for corresponding claims previously presented. A copy of the amended claims showing current revisions is attached.

12. (Amended) A semiconductor memory according to claim 9, wherein the control gate and the gate electrode are disposed so closely that a channel layer located in a part of the island-like semiconductor layer opposed to the gate electrode is electrically connected to a channel layer of the memory cell.

14. (Amended) A semiconductor memory according to claim 9, wherein a plurality of memory cells are formed with regard to one island-like semiconductor layer, and an electrode for

electrically connecting a channel layer located in a part of the island-like semiconductor layer opposed to the gate electrode to a channel layer of the memory cell is further formed between the control gate and the gate electrode.

15. (Amended) A semiconductor memory according to claim 9, wherein all, some or one control gate(s) are formed of the same material as all, some or one gate electrode(s).

16. (Amended) A semiconductor memory according to claim 9, wherein the charge storage layer and the gate electrode are formed of the same material.

23. (Amended) A process according to claim 20, wherein the introduced impurity is diffused so that a continuous impurity diffusion layer is formed in the island-like semiconductor layer in a direction horizontal to a surface of the semiconductor substrate.

24. (Amended) A process according to claim 20, wherein a plurality of island-like semiconductor layers are formed in matrix, sidewalls of the island-like semiconductor layers are oxidized to form oxide films, and the oxide films are removed so that the width of the island-like semiconductor layers in one direction is smaller than a distance between the island-like semiconductor layers in the same direction.

25. (Amended) A process according to claim 20, wherein a third conductive film is formed between separated first conductive films.

26. (Amended) A process according to claim 20, wherein the first conductive film is separated into two or more separated first conductive films which are located so closely that a channel layer formed beneath a separated first conductive film along the island-like semiconductor layer is electrically connected to an adjacent channel layer.

27. (Amended) A process according to claim 20, wherein an insulating film is formed in a part of a surface of the island-like semiconductor layer, another insulating film is formed in another

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part of the surface of the island-like semiconductor layer, and the first conductive film is formed on the insulating film and on said another insulating film.

REMARKS

The above amendments are made to place the claims in a more traditional format. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

12. (Amended) A semiconductor memory according to claim 9 [or 10], wherein the control gate and the gate electrode are disposed so closely that a channel layer located in a part of the island-like semiconductor layer opposed to the gate electrode is electrically connected to a channel layer of the memory cell.

14. (Amended) A semiconductor memory according to claim 9 [or 10], wherein a plurality of memory cells are formed with regard to one island-like semiconductor layer, and an electrode for electrically connecting a channel layer located in a part of the island-like semiconductor layer opposed to the gate electrode to a channel layer of the memory cell is further formed between the control gate and the gate electrode.

15. (Amended) A semiconductor memory according to claim 9[, 10, 12 or 14], wherein all, some or one control gate(s) are formed of the same material as all, some or one gate electrode(s).

16. (Amended) A semiconductor memory according to claim 9[, 10, 12 or 14], wherein the charge storage layer and the gate electrode are formed of the same material.

23. (Amended) A process according to [any one of claims 20 to 22] claim 20, wherein the introduced impurity is diffused so that a continuous impurity diffusion layer is formed in the island-like semiconductor layer in a direction horizontal to a surface of the semiconductor substrate.

24. (Amended) A process according to [any one of claims 20 to 22] claim 20, wherein a plurality of island-like semiconductor layers are formed in matrix, sidewalls of the island-like semiconductor layers are oxidized to form oxide films, and the oxide films are removed so that

the width of the island-like semiconductor layers in one direction is smaller than a distance between the island-like semiconductor layers in the same direction.

25. (Amended) A process according to [any one of claims 20 to 22] claim 20, wherein a third conductive film is formed between separated first conductive films.

26. (Amended) A process according to [any one of claims 20 to 22] claim 20, wherein the first conductive film is separated into two or more separated first conductive films which are located so closely that a channel layer formed beneath a separated first conductive film along the island-like semiconductor layer is electrically connected to an adjacent channel layer.

27. (Amended) A process according to claim 20 [or 22], wherein an insulating film is formed in a part of a surface of the island-like semiconductor layer, another insulating film is formed in another part of the surface of the island-like semiconductor layer, and the first conductive film is formed on the insulating film and on said another insulating film.